

What is claimed is:

1. A disk array device comprising:

a disk array box body for arranging a box body therein;

a first disk drive box body in which plural disk drives for storing data are spaced at intervals for ventilation and are arranged in a matrix shape;

a second disk drive box body in which plural disk drives for storing data are spaced at intervals for ventilation and are arranged in a matrix shape;

a controller box body constructed by arranging plural disk adapter boards for controlling the writing or reading operation of data with respect to the plural disk drives within said first disk drive box body and the plural disk drives within said second disk drive box body, plural host adapter boards connected to a host device and receiving data from said host device, and plural memory boards for storing data and control information written or read from said host adapter board and said disk adapter board, such that said plural disk adapter boards, said plural host adapter boards and said plural memory boards are spaced and arranged at intervals for ventilation;

a processor for management constructed by a PC for industry connected to said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, and collecting and managing management information relating to said plural disk adapter boards, said

plural host adapter boards and said plural memory boards;

a computer for output used to output said management information managed by said processor for management;

a fan for exhaust for exhausting a ventilating wind flowed via the interior of said controller box body and a ventilating wind flowed via the interiors of said first disk drive box body and said second disk drive box body to the exterior of said disk array box body; and

a power source device for supplying electric power to the plural disk drives within said first disk drive box body, the plural disk drives within said second disk drive box body, said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, said processor for management, said computer for output and said fan for exhaust;

wherein said disk array box body is constructed such that said controller box body is arranged above said power source device through a ventilation interrupting plate for preventing the ventilating wind from said power source device;

said first disk drive box body and said second disk drive box body are arranged above said controller box body by interposing a flow path for passing the ventilating wind flowed via the interior of said controller box body between said first disk drive box body and said second disk drive box body;

said processor for management is arranged on the side

face of said first disk drive box body so as not to prevent the intervals for ventilation between the plural disk drives within said first disk drive box body;

said computer for output is arranged on the side face of said second disk drive box body so as to be pulled out such that no intervals for ventilation between the plural disk drives within said second disk drive box body are prevented;

said fan for exhaust is arranged above said first disk drive box body and said second disk drive box body; and

said computer for output is pulled out of said disk array box body and is rotated and utilized on said second disk drive box body side when said management information is outputted and utilized.

2. A disk array device comprising:

a disk array box body for arranging a box body therein;

a disk drive box body in which plural disk drives for storing data are spaced at intervals for ventilation and are arranged in a matrix shape;

a controller box body constructed by arranging plural disk adapter boards for controlling the writing or reading operation of data with respect to the plural disk drives within said disk drive box body, plural host adapter boards connected to a host device and receiving data from said host device, and plural memory boards for storing data and control information written or read from said host adapter board and said disk adapter

board, such that said plural disk adapter boards, said plural host adapter boards and said plural memory boards are spaced and arranged at intervals for ventilation;

a processor for management constructed by a PC for industry connected to said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, and collecting and managing management information relating to said plural disk adapter boards, said plural host adapter boards and said plural memory boards;

a computer for output used to output said management information managed by said processor for management;

a fan for exhaust for exhausting a ventilating wind flowed via the interior of said controller box body and a ventilating wind flowed via the interior of said disk drive box body to the exterior of said disk array box body;

a power source device for supplying electric power to the plural disk drives within said disk drive box body, said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, said processor for management, said computer for output and said fan for exhaust; and

a front door attached to the front face side of said disk array box body and opening and closing said disk array box body;

wherein said disk array box body is constructed by a first disk array box body for arranging said controller box body and

said power source device, and a second disk array box body for arranging said disk drive box body;

said first disk array box body is constructed such that said controller box body is arranged above said power source device;

said processor for management is arranged on the side face of said controller box body so as not to prevent the intervals for ventilation between said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body;

said computer for output is rotatably arranged on the rear face side of said front door so as not to prevent the intervals for ventilation between said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body; and

said fan for exhaust is arranged above said controller box body;

said second disk array box body is constructed such that said fan for exhaust is arranged above said disk drive box body; and

said computer for output is rotated and utilized with respect to said front door in the opening state of said front door when said management information is outputted and utilized.

3. A disk array device comprising:

a disk array box body for arranging a box body therein;

a disk drive box body in which plural disk drives for storing data are spaced at intervals for ventilation and are arranged in a matrix shape;

a controller box body constructed by arranging plural disk adapter boards for controlling the writing or reading operation of data with respect to the plural disk drives within said disk drive box body, plural host adapter boards connected to a host device and receiving data from said host device, and plural memory boards for storing data and control information written or read from said host adapter board and said disk adapter board, such that said plural disk adapter boards, said plural host adapter boards and said plural memory boards are spaced and arranged at intervals for ventilation;

a processor for management constructed by a PC for industry connected to said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, and collecting and managing management information relating to said plural disk adapter boards, said plural host adapter boards and said plural memory boards;

a computer for output used to output said management information managed by said processor for management;

a fan for exhaust for exhausting a ventilating wind flowed via the interior of said controller box body and a ventilating wind flowed via the interior of said disk drive box body to the exterior of said disk array box body; and

a power source device for supplying electric power to the plural disk drives within said disk drive box body, said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, said processor for management, said computer for output and said fan for exhaust;

wherein said disk array box body is constructed such that said processor for management and said computer for output are arranged in positions for preventing no flow of a ventilating wind within said disk drive box body; and

said computer for output is pulled out of said disk array box body and is further rotated and utilized when said management information is outputted and utilized.

4. The disk array device according to claim 3, wherein said computer for output is constructed so as to be pulled out by a pulling-out mechanism having a slide rail.

5. The disk array device according to claim 4, wherein said computer for output is constructed so as to be placed and supported by a pedestal rotatably arranged with respect to said slide rail.

6. The disk array device according to claim 3, wherein said disk array box body is constructed such that said controller box body is arranged above said power source device through a ventilation interrupting plate for preventing the ventilating wind from said power source device.

7. The disk array device according to claim 6, wherein said disk drive box body is constructed by a first disk drive box body and a second disk drive box body; and

said disk array box body is constructed such that said first disk drive box body and said second disk drive box body are arranged by interposing a flow path for passing the ventilating wind flowed via the interior of said controller box body between said first disk drive box body and said second disk drive box body above said controller box body.

8. The disk array device according to claim 7, wherein said disk array box body is constructed such that said processor for management is arranged on the side face of said first disk drive box body; and

said computer for output is arranged on the side face of said second disk drive box body so as to be pulled out.

9. The disk array device according to claim 8, wherein said disk array box body is constructed such that said fan for exhaust is arranged above said first disk drive box body and said second disk drive box body.

10. A disk array device comprising:

a disk array box body for arranging a box body therein;

a disk drive box body in which plural disk drives for storing data are spaced at intervals for ventilation and are arranged in a matrix shape;

a controller box body constructed by arranging plural

disk adapter boards for controlling the writing or reading operation of data with respect to the plural disk drives within said disk drive box body, plural host adapter boards connected to a host device and receiving data from said host device, and plural memory boards for storing data and control information written or read from said host adapter board and said disk adapter board, such that said plural disk adapter boards, said plural host adapter boards and said plural memory boards are spaced and arranged at intervals for ventilation;

a processor for management constructed by a PC for industry connected to said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body, and collecting and managing management information relating to said plural disk adapter boards, said plural host adapter boards and said plural memory boards;

a computer for output used to output said management information managed by said processor for management;

a fan for exhaust for exhausting a ventilating wind flowed via the interior of said controller box body and a ventilating wind flowed via the interior of said disk drive box body to the exterior of said disk array box body;

a power source device for supplying electric power to the plural disk drives within said disk drive box body, said plural disk adapter boards, said plural host adapter boards and said plural memory boards within said controller box body,

said processor for management, said computer for output and said fan for exhaust; and

a front door attached to the front face side of said disk array box body and opening and closing said disk array box body; wherein said disk array box body is constructed such that said processor for management and said computer for output are arranged in positions for preventing no flow of a ventilating wind within said disk drive box body; and

said computer for output is rotatably arranged on the rear face side of said front door and is rotated and utilized with respect to said front door in the opening state of said front door when said management information is outputted and utilized.

11. The disk array device according to claim 10, wherein said computer for output is constructed so as to be placed and supported by a pedestal rotatably arranged with respect to said front door.

12. The disk array device according to claim 10, wherein said disk array box body is constructed by a first disk array box body for arranging said controller box body and said power source device and a second disk array box body for arranging said disk drive box body;

said first disk array box body is constructed such that said controller box body is arranged above said power source device, and

said fan for exhaust is arranged above said controller box body; and

said second disk array box body is constructed such that said fan for exhaust is arranged above said disk drive box body.

13. The disk array device according to claim 12, wherein said first disk array box body is constructed such that said processor for management is arranged on the side faces of said controller box body and said power source device.

14. The disk array device according to claim 12, wherein said first disk array box body is constructed such that said processor for management is arranged between said power source device and said controller box body.

15. The disk array device according to claim 14, wherein said processor for management is constructed by forming a hole for ventilation in its box body.

16. The disk array device according to claim 12, wherein said first disk array box body is constructed such that said processor for management is arranged on the lower side of said power source device.

17. The disk array device according to any one of claims 1 to 16, wherein a plurality of said processors for management are arranged.

18. The disk array device according to any one of claims 1 to 17, wherein said computer for output is constructed by a notebook type PC.

19. The disk array device according to any one of claims 1 to 18, wherein said processor for management and said computer for output are connected by LAN.

20. The disk array device according to any one of claims 1 to 19, wherein said computer for output is constructed so as to be detachably attached to said processor for management.